[a, Pouter Pigeon; b, Carrier Pigeon; c, Jacobin Pigeon; d, Ringdove; e, Rock Pigeon; f, Fan-tailed Pigeon; g, Nun Pigeon; h, Tumbler Pigeon. At top, several varieties.

THE DOMESTIC PIGEON.

This beautiful bird, which time immemorial has been reclaimed by man, is familiar to all. Its varieties are even more numerous than those of the common fowl; some of them are remarkable for their singularity of appearance, and others for their elegance.

At what period man added the pigeon to the list of his domestic feathered retainers is not very clear; but that it was at a very remote epoch is certain. We find references to it in the classical writers; and we know that it was among the clean animals according to the law of Moses. In the East the dove or pigeon has always been regarded with favour; and the expedient of employing it as a carrier of letters or written messages was often practised: its rapidity of flight, its almost unerring instinct in finding its way home, and the eagerness with which it returns to its dwelling, recommending it for such a use.

But before noticing the habits and manners of our domestic pigeon, we ought to glance at its origin; and this the rather as the point has been involved in no little confusion.

In Europe we have the following wild species of the genus Columba: the Ringdove, Cushat, or Queest (*Columba Palumbus*); the Stockdove (*Columba Ænas*); the Rockdove (*Columba livia*); and the Turtle-dove (*Columba Turtur*).

The Ringdove is the largest of our wild pigeons, and is common in the wooded districts of our island, as well as of the greater portion of Europe. In the winter it assembles in numerous flocks, which resort to the stubble-lands in quest of food. It devours all kinds of grain, peas, beech-mast, acorns, berries, and the green leaves of the turnip. During this season of the year its numbers are often increased by the arrival of flocks from the more northern parts of Europe; but in our island, and in France and the southern countries, it is not migratory. No naturalist has regarded the ringdove as identical with the domestic pigeon. Its mode of building its nest, a flat platform of twigs laid crossways on the fork of a branch—its size—its refusal when in captivity to breed with the pigeon—and the failure of every attempt to reduce it to a state of domestication,—are of themselves, setting aside colouring, sufficient proofs of specific distinctness.

Still more remote from the common pigeon is the Turtle-dove, a bird of passage, and one of the spring visitors to our shores, "when flowers appear on the earth, and the time of the singing of birds is come." In September the turtle leaves our shores for a warmer climate. Colour, size, and habits clearly separate the turtle from the pigeon. We have then two other species, the Stockdove and the Rockdove.

The Stockdove derives its name from being, as was presumed, but erroneously, the stock to which the common pigeon is referrible. This error arose, no doubt, from our early ornithologists having confounded the stockdove with the rockdove, and so mixed up the history of both. Montague, in his 'Dictionary of Ornithology,' confounds these birds together, deeming the *Columba livia* and the *C. ænas* to be identical. His description however refers to the *C. livia* (Rockdove); and it would seem that he was unacquainted with the true *C. ænas*.

White, in his 'History of Selborne,' well distinguishes the stockdove, and the "small blue rock-pigeon;" observing, that "unless the stockdove in winter greatly varies from itself in summer, no species seems more unlikely to be domesticated and to make a *house-dove*. We very rarely see the latter settle on trees at all, nor does it ever haunt the woods; but the former, as long as it stays with us, from November perhaps to February, lives the same wild life with the ringdove; frequents coppices and groves, supports itself chiefly by mast, and delights to roost in the tallest beeches. Could it be known in what manner the stockdoves build, the doubt would be settled with me at once, provided they construct their nests on trees, like the ringdove, as I much suspect they do."

From this it appears that White had only a partial degree of information respecting the stockdove. This bird is indigenous in our island, breeding in the woods; but its localities are circumscribed. In winter the flocks are increased by accessions from the northern provinces of Europe; but these visitants depart in spring. The same circumstances occur in the instance of many other birds: as the thrush and the lark, of which our native flocks are joined in winter by arrivals from higher latitudes.

In our island the stockdove limits its range almost exclusively to the midland counties, and is common in Hertfordshire. It is rarely seen in the southern or western counties, and still more rarely in the northern. This bird makes an artificial nest of twigs in the holes of decayed and timeworn trees, and in cavities on the top of pollards, but never places it on the forked or spreading branches of a tree. As is the case with all the dove tribe, its eggs are two in number.

The stockdove is not only found in Europe, but in the northern provinces of Africa, and in various parts of Asia. We have seen specimens from the neighbourhood of Trebizond and Erzerum, where it is said to be common.

In a 'Catalogue of the Birds of the Dukhun,' by Colonel Sykes, is included the stockdove. We are informed that the Mahrattas term it *Parwa*. It is "the most common bird in the Dukhun, congregating in flocks of scores, and a constant inhabitant of every old dilapidated building." Colonel Sykes saw the same species, on board ship on the voyage to England, brought from China.

Some differences in the colouring noticed by Colonel Sykes, taken in conjunction with his statement that it inhabits old dilapidated buildings, induce a suspicion that the Dukhun stockdove differs specifically from that of Europe and Western Asia. The stockdove in Europe is a tenant of the woods.

Selby thus details the colours of the stockdove: "Head and throat deep bluish grey; sides of the neck glossed, with different shades of green and purple; the feathers shorter and more distinct than those of the rockdove; lower parts of the neck and breast pale lavender purple; belly, thighs, and under tail-coverts bluish grey, with a slight purplish tinge; back deep bluish grey; wing-coverts paler, and some of the greater ones spotted and barred with black, but not forming any defined bar as in the above-mentioned species. Quills blackish grey, the outer webs near the base of the feathers passing into bluish grey; lower part of the back and tail-coverts bluish grey; tail bluish grey, with a broad black bar at the end, and having the outermost feather margined with white; iris brownish red; legs and toes bright cochineal-red."

As we have already stated, the stockdove has been confounded with the rockdove, and the characters of the latter have been consequently given as those of the former. The rockdove, however, is a totally distinct species, and its habits are unlike those of any other of our Columbæ. As its name imports, it frequents rocks and precipices, especially along the sea-coast, and is far from being uncommon. It is partial to deep caverns, in which it breeds. It haunts the caves in the cliff at St. Abb's Head, on the Berwickshire coast; those in the Isle of Bass; of Caldy Island, South Wales; and of the wild precipices of the Orkneys. We have seen it frequenting the steeples of churches near the coast, and have remarked numbers inhabiting the holes and crevices in the higher parts of Canterbury Cathedral. In the latter instances it may be said that the birds are merely the emancipated descendants of our domestic breed. If so, with their freedom they have regained their genuine colours in most instances.

We have seen many specimens from Northern Africa and Western Asia. Selby states that it is numerous in the rocky islands of the Mediterranean, where it lives and breeds in caverns on the shore; and is equally abundant in the north of Africa, especially in the island of Teneriffe, where it is met with in incredible numbers.

The rockdove is more slender than the stockdove, and is astonishingly rapid in flight. It may at once be distinguished from the latter by the white colour of the lower part of the back, and the two distinct bands of leaden-black across the wings. These distinctive marks are found in our ordinary dovecote pigeons; and when in the fancy kinds they become, by the breeder's art, imperceptible, they are ever ready to return, and hence one of the difficulties of keeping up a particular fancy stock. It is, then, to the rockdove, a species almost universally spread in its wild state throughout the Old World, that the domestic pigeon and its varieties must be referred. All these varieties breed with each other, and with the wild rockdove; and

without due care, all soon degenerate, as it is termed, and acquire the original form and colouring.

Many of our varieties are very beautiful, and they all present peculiarities of manner and flight, well known to those who take pleasure in them. The Carrier, originally from the East, is distinguished by a long bill, with large fleshy caruncles at the base, and a naked space round the eye; the colour is either black or blue. This variety possesses great powers of flight: having mounted to a considerable elevation, it directs its course in a straight line to a great distance, and then returns home. We had once a pair, purchased from a breeder, which, on first being let out of the pigeon-house, where they had been confined for about a fortnight, flew in a direct line till out of sight: we supposed them lost; in about four hours, however, they returned, and settled upon their domicile, which they had, till that day, never before quitted.

The Tumbler is distinguished by flying in circles and throwing itself over backwards, so as to perform a sommerset in the air: before settling, this evolution is often performed several times in succession. A flock of tumblers in exercise is a very pretty spectacle.

The Fantail is distinguished by the arrangement of the tail-feathers like those of a fowl: their number is often sixteen or eighteen. This variety is usually white. The males have a peculiarly vibratory motion of the neck, and walk very elegantly. As respects powers of flight, this variety is very inferior.

The elevated figure, feathered legs, and distended crop of the Pouter, render him conspicuous—not elegant. The Jacobin is a small pigeon, mostly of a rusty-yellow, with a frill of reverted feathers down each side of the neck to the chest.

The Nun is a beautiful variety of a pure white, excepting the head, quill-feathers, and tail, which are black. We might thus proceed to a great length in the mere enumeration of varieties, of which there are at least five and twenty distinguished by their peculiarities; but we will pass on to consider one remarkable character of the pigeon, before alluded to—its instinctive mode of discovering its own abode, and return to it, when carried to a great distance away. It is evident to all conversant with the pigeon, that it has the strongest affection for its own home—an instinctive *Nostalgia*, which in old birds can scarcely be eradicated by time; confined for weeks or months—on gaining their liberty, off they fly to the "old familiar spot," and if taken away again, still return on the first opportunity. Young birds are much more easily reconciled to a change of tenement, and soon learn to regard the new place as their own. It is this desire—this longing for home, which impels the pigeon carried to a distant spot and turned loose, to attempt to regain it; and regain it the bird does, at least in general; but the query arises—how does it know in what direction its home lies? how does it know which way to direct its rapid course? If the distance be short, we can easily conceive that the bird making wide circles at a great elevation may at one part of the circle discern some known object, which will at once indicate the direction to be followed. A circle of three or four miles would give the bird the command of a very wide extent of country; and a tall object, as a spire, previously visited voluntarily, or seen from its abode, would afford the desired clue. This perhaps may account in ordinary cases for the return of the pigeon to its home; but it will not account for the return of the bird from great distances. We hear of pigeons being brought from towns on the Continent, as Brussels, &c., and set at liberty in London; and of their return in a comparatively short space of time, few of the number failing to find their way. Trials of this kind have been often repeated; and unless the weather proves misty, or fogs hang over the sea, the birds cross the Channel safely, and regain their home. That they are sometimes dispersed and lost in foggy weather proves that they use their sight in pursuing their homeward course, but still the difficulty remains—how is that course determined? The same difficulty meets us in the migration of the swallow. Its winter abode is Western Africa. It finds its way to the African shores, and returns again to Europe: but what is more, the same pair will steer not only for England, but for the very chimney or barn which they habitually tenant as their summer breeding-place; and it is probable that they visit a determinate spot in Africa. It is one of the facts in natural history, which we must be content to leave unexplained.

The habits of the domestic pigeon are too well known to need detailing. The wild rockdove, which, like its tame relatives, pairs with a single mate, and contracts a permanent union, breeds twice or thrice a year; the domestic race, however, breed oftener; and the male and female relieve each other in the wearisome duty of incubation. At this epoch the crop of both becomes highly vascular, and secretes from certain glandular follicles dispersed over it a white milky fluid in great abundance. It is with this fluid that the newly hatched young are fed for the first three days exclusively; afterwards the usual grain is added; and less and less given of the milky secretion, which is suppressed by the eighth day, counting from the time of hatching. The flesh of all the pigeon tribe is excellent, and that of young birds of the domestic stock is in high estimation.

The following pigeons and varieties are represented in the engraving: the Ringdove, the Rock-pigeon, (var.), the Carrier, the Jacobin, the Nun, the Pouter, the Tumbler, and the Fantail.

FEATHERS—THEIR NATURE AND USES.

[Concluded from p. 359.]

We now proceed to notice the manner in which feathers are prepared as decorations for the head. The *plumassier* is the operator who undertakes this preparation. As the ostrich-feather is one of the most valuable of the feathers employed in this way, a notice of the mode in which it is prepared will serve as a general representative of the whole; but the mode of procuring the feathers must be first briefly noticed.

One of the most remarkable points in the African ostrich is the beauty of the plumage, particularly of the long feathers that compose the wings and the tail. It is chiefly to obtain these feathers than man has been so active in the pursuit of these birds. The feathers were prized centuries ago, for the ancients used them as ornaments for their helmets. At the present day the ostrich-feather is deemed an article of luxury, as well in the East as in Europe; and the Arabs of the desert are incited to the pursuit of the birds for the profit derived from the feathers. An ostrich in actual motion can outrun the fleetest horse, but the Arabs succeed in catching them by a well-concerted plan. The Arab, mounted on a horse trained for the purpose, gives chase to an ostrich which he may chance to see in the desert, and manages to keep him constantly in view, taking care not to push him so close as to make him escape to the mountains, but at the same time so as to prevent him from taking food. This is the more readily effected, as the bird takes its course in a wavering and circuitous direction, which is greatly shortened by the hunter, who comes upon him by a direct path. Thus they continue two or three days, the hunters relieving each other by turns, until the ostrich becomes exhausted by fatigue and famine, when he is killed with clubs by the hunters, who are careful not to soil the feathers with the blood of the poor animal. The feathers, for

the obtaining of which this hard chase is run, are plucked from the bird, and made an article of commerce. On their being brought to England, a duty of ten shillings per pound is paid on them in the undressed state; and if imported after dressing or preparation, the duty is much higher.

The feathers are assorted into various classes, according to their quality. Those taken from the back and above the wings are deemed the best; those from the wings are ranked next; while those from the tail are ranked as least valuable. The finest white feathers of the female ostrich generally have their ends a little greyish, which lessens their lustre, and renders them rather less valuable than those of the male. The ostrich-down, which is black in the male and grey in the female, is merely the feathers of the other parts of the body, varying from four to fourteen inches in length.

According to the account of Dr. Ure, in his new Dictionary, the mode of preparing the feathers for use is as follows:—Four ounces of white soap, cut small, are dissolved in four pounds of water, moderately hot, in a large basin, and the solution is made into a lather by beating with rods. Two bundles of the feathers, tied with packthread, are then introduced, and are rubbed well with the hands for five or six minutes. After this soaping they are washed in clear water as hot as the hand can bear. The feathers being thus brought to a clean state, they undergo three successive processes, for the purpose of whitening or bleaching them. In the first place they are immersed in hot water mixed with Spanish white, and well agitated in it; after which they are washed in three successive waters. In the next place they are *azured* by being passed quickly through a bath of cold water containing a little indigo tied up in a fine cloth. Lastly, they are *sulphured*, in the same way as straw hats are done; a process, one mode of performing which is as follows:—A cask, open at both ends, with its seams papered, is set upright a few inches from the ground, having a hoop nailed to its inside about six inches beneath the top, to support another hoop with a net stretched across it, on which the straw or the feathers are laid. The cask having been covered with a tight overlapping lid stuffed with lists of cloth, a brazier of burning charcoal is inserted within the bottom, and an iron dish containing pieces of brimstone is put upon the brazier. The brimstone soon takes fire, and fills the cask with sulphurous acid gas, whereby the straw or the feathers become bleached in the course of three or four hours. Sulphuring chests are often used instead of this simple apparatus, but the principle of action is the same.

The feathers, having been bleached in some such way as this, are dried by being hung upon cords, the fibres being opened by shaking at intervals. The ribs are then scraped with a bit of glass cut circularly, in order to render them very pliant; and the filaments are made to assume the curly form so much admired, by drawing the edge of a blunt knife over them. Those which are of a dingy colour are died black by a strong decoction of logwood aided by copperas. Feathers, from whatever bird they may be taken, are dyed by the aid of ingredients similar to those employed in other departments of dyeing. A rose-colour or pink is given by safflower and lemon-juice; a deep red by a decoction of Brazil-wood; a crimson by a similar dye, followed by a decoction of cudbear; blue by indigo; yellow by turmeric or weld; &c. After all such processes of dyeing, the feathers are well cleansed, rinsed, and dried

We must now pass on to give a brief notice of the employment of feathers as a stuffing for beds. To what period we may trace the first application of feathers to this purpose is not easily determined The ruder nations of antiquity probably slept at night on the skins which formed their clothing by day; and in process of time these skins were replaced, as a material for a bed, by loose rushes, heath, straw, &c. Bed-cases or ticks, filled with chaff, heath, or straw, were used by the English gentry five or six centuries ago. But it appears by a statute passed in the reign of Henry VII., that feather-beds were then commonly in use in England; for certain precautions are therein ordered to be taken as to the feathers selected, for instance, no feather-beds were to be sold if any scalded feathers were mixed with the dry-pulled feathers; no down-beds, if fen-down was mixed with clean down; no beds, mattresses, or cushions, if stuffed with horse-hair, goat's hair, or neat's hair. The reason assigned for these prohibitions was, that scalded feathers and fen-down (down obtained from geese reared in the fens of Lincolnshire) and animal hair were prejudicial to the health of his majesty's liege subjects..

Goose feathers are usually assorted into white and grey, the former bearing a higher market-price than the latter. Those feathers known as "poultry feathers," such as those obtained from turkeys, ducks, and fowls, are of lower value; not from any deficiency in the quality of softness, but because their elasticity is not equal to that of goose feathers. The feathers of the wild-duck are said to be both soft and elastic; but the disagreeable odour of the oil contained in them is so retentive that it is with difficulty removed. A small quantity of lime mixed with the feathers tends to their preservation, by combining with the oil which they contain, and also by preventing the putrefaction of the small portions of animal fibre which occasionally adhere to them.

As an example of the mode in which feathers are cleaned for beds, we may give the following, for which the Society of Arts awarded a premium some years ago:—Quicklime and clean water are mixed together, in the proportion of one pound of lime to every gallon of water; and when the undissolved lime is precipitated in fine powder, the clean lime-water is poured off for use. The feathers which are to be cleaned are put into a tub, and the lime-water is added to the depth of three inches, in which the feathers are well steeped and stirred. After remaining in this state three or four days, the feathers are taken out of the foul water, laid on a sieve to drain, washed in clean water, and then laid upon nets similar to cabbage-nets, where they are left to dry. While lying on the nets, the feathers are shaken from time to time, to aid the admission of air, by which the drying is effected. The final process is to beat them, by which the dust is separated from them.

We may here remark that the *down* spoken of above, and which has become a kind of symbol of softness, is the assemblage of very fine feathers taken from the breasts of birds. Of these the most valuable is that obtained from the eider-duck. The birds pluck it from their breasts, and line their nests with it; and the down obtained in this way, called live-down, is more valuable, because more elastic, than the dead-down plucked from the animal when dead. In Iceland and Norway this kind of stuffing for beds is very much used, and is spoken of by travellers as forming one of the most delightful of all beds. Generally the sleeper lies on one bed, and has another, made rather thin, placed on him. in lieu of what we should term bed-clothes. The down, from its great lightness, does not produce any inconvenient pressure on the body; while from its being such a non-conductor of heat, the natural warmth of the body is not abstracted during sleep, however rigorous may be the temperature of the room.

THE DANUBE.

[Concluded from page 351.]

Near Vienna a great change takes place in the appearance of the river. The rocks through which it has so long been compelled to find a tortuous passage disappear; the mountains recede, leaving on both sides a considerable plain; and the chafed and troubled waters, sinking into comparative rest, divide and playfully wind through innumerable channels, and round many a pleasant island they have thus formed. It is, however, still so rapid that it can only be navigated agreeably and economically in its downward course. In its passage into the kingdom of Hungary, between Haimburg and Presburg, it is skirted by the Leitha range of the Noric Alps on the right, and by the lesser Carpathian mountains on the left. From hence steam-vessels frequently meet the eye passing to and fro betwixt Vienna and Constantinople. The inhabitants of Presburg, the once flourishing capital of Hungary, hope much from the introduction of steam on the Danube. This antient town is finely situated on a hill commanding an extensive view over the plain watered by the great river, which is here crossed by a bridge of boats three hundred and sixty-five paces in length. Although Ofen or Buda is now the seat of government, the king is still crowned at Presburg, and the ceremony is followed by a very peculiar custom:—As soon as the monarch is crowned in the cathedral, he rides to an artificial hill or mound of inconsiderable height, and brandishing his sword towards each of the four cardinal points, thereby intimates to the world that he will defend the kingdom against its enemies from whatever quarter they may come. From Presburg to Comorn, the Danube flows through two channels (the northern receiving the river Waag, and the southern the Raab), which enclose the island of Schutt, measuring not less than fifty miles in length, and from four to nine in breadth. At the eastern end of the island the channels unite, and then pursue their course between the mountains of the Bakony forest, and the base of those of the Carpathian range. At the point of junction of the channels, and immediately opposite the afflux of the Waag into the Danube, is the royal free town and maiden fortress of Comorn. The latter promises long to maintain its virgin reputation, if we may judge of its fate by the strength of its fortifications. The fortress was built by Mathias Corvinus, king of Hungary; it is defended by extensive works and têtes-de-pont on both banks; and the great original strength of the place has been still further enhanced by the additional works erected in the present century. Comorn, like Presburg, has a bridge of boats; it has in addition a flying bridge. At Gran, like Comorn, a royal free town, we find another strong fortress, standing on a rocky island in the river, which has undergone several sieges. We now pass rapidly on to the more interesting parts of the Danube, namely, the portion lying between Pesth and Vidin or Widdin. Pesth, the most distinguished city of Hungary both for commerce and population, is on the left bank, and immediately opposite, on the other side of the river, is the city of Ofen or Buda. The two places are connected by a bridge of forty-seven large boats, united by chains, and floored with planks, one thousand five hundred paces long. Pesth looks picturesque from the Danube, being for the most part well built, and enjoying so pleasant a site. Buda is nearly as populous as Pesth, and still more romantic in in its appearance. It is said to derive its name from a

brother of Attila, who made it his place of residence, and greatly improved it. It is built round the Schlossberg mountain, in the midst of a hilly and beautiful country, encircled on three sides by vineyards and forests. The central part of Buda is enclosed within what is called the fortress, and, rising on all sides round the acclivities of the Schlossberg, is defended at the foot of the latter by walls and bastions. The fortress contains a royal and several other palaces, two large churches, various great public edifices, and several handsome squares. Near the Schlossberg rises a much higher rock called the Blocksberg, on which is an observatory. Leaving Buda and Pesth, one is struck by the curious flour-mills of the Danube, which consist of a wooden house erected in a large unwieldy boat moored near to the most rapid part of the stream. Parallel to this, and only a few paces distant, is fixed a smaller boat; the heads of both being directed down the stream. Between them is suspended a water-wheel, which of course revolves rapidly with the flow of the river. Ten or twenty of these are sometimes found in succession. Not far from Pesth we pass the large island of Ratoykovi, sprinkled with neat and prosperous looking villages, and clothed with luxurious forests. On the right extends one of those apparently boundless plains which are so striking a geographical feature of Hungary. Beyond this extensive tract of pasture-land, with its large flocks of sheep and droves of oxen, appear vineyards on every side, separated by hedges teeming with the blossoms of the lilac and barberry. Tobacco also is largely grown, and a small quantity of saffron. Passengers by the steam-boats find great amusement in noticing the manners and costume of the Hungarian peasantry drawn to the banks by the attraction of the new wonder of navigation. Both men and women are well looking. The former are lightly clad in shirts, waistcoats, and loose trowsers, all made of coarse canvas, and the trowsers in particular looking at a little distance like petticoats. Sandals defend their feet; the legs are stockingless. As to the women, they do not even wear the sandals. Their head-dress consists simply of a blue handkerchief tied under the chin; their gowns are of blue, red, or green calico; and a profusion of different coloured necklaces of glass or coral complete the picture.

Mohacs, an insignificant village, is only of interest as being the scene of a great battle fought between the Hungarians under Louis II. and the Turks commanded by the great Solyman, where the former were defeated with great slaughter, and their king miserably perished in endeavouring to escape. His horse fell back whilst crossing a deep marsh, and the unfortunate monarch, loaded with heavy armour, was suffocated. From Mohacs the scenery of the Danube is for some distance comparatively insipid and uninteresting, but as we approach Peterwardein it improves, and we find upon our right undulating and forest-clad hills, villages prettily situated on the minor eminences, and church spires issuing from masses of green foliage, and "pointing with silent finger unto Heaven." Peterwardein is the frontier and principal fortress of Slavonia, the territory into which we are advancing, and from its strength and situation has been designated the Gibraltar of Hungary. It stands at one of the angles which the Danube is so fond of making, and on the right bank. The upper fortress and the horn-work appear on a rock isolated on three sides, and the lower, which includes the town, at its northern foot or base. The waters of the Danube wash the walls on the west and south sides. It possesses a well, excavated right through the rock down to a spot lower than the Danube; it is defended on the only accessible side by very broad and deep moats; and is so large that a garrison of ten thousand men can be accommodated within its walls. A bridge of boats over the Danube, which is here seven hundred feet wide, and from fifty to sixty deep, connects Peterwardein with the opposite town of Neusatz. Near Semlin, the next place of any importance, was fought the decisive battle of Salankement, between the grand-vizier of Achmet, the brother and successor of Solyman, (a poet and musician as well as a monarch), who commanded the Turkish army, and Prince Lewis of Baden, who led the Imperialists. The result was the defeat of the Turks, with the loss of twenty-five thousand men, one hundred and fifty-four pieces of cannon, ten thousand tents, innumerable camels, mules, and other beasts of burden, and many chests of silver and copper money. A place still more distinguished in military annals next meets our gaze—Belgrade, with its splendid mosques, tall minarets, domes, gardens, and cypress-groves. It stands in a most noble situation, where the waters of the Save and the Danube join. "These two majestic streams, blending their waters at this point, expand into what might be mistaken for the ocean itself, and the spot where the Save pours itself into the queen of European rivers is clearly perceptible from the diversity of the tints."* Belgrade was founded by the Romans, afterwards destroyed by the barbarians, and then rebuilt by Justinian. The citadel is a commanding object, standing as it does on a steep hill one hundred feet high, and jutting out into the waters of the Danube. This is the source of many a Turkish atrocity towards Christian captives. Rhigas the Greek was here sawed asunder limb by limb; and so late as 1815, thirty-six unhappy Servians were impaled alive, in violation of a pledge given as to their safety. Belgrade is the seat of a pasha of three tails, and of the only garrison that the Turks, in pursuance of their treaty with the Servians, can maintain in the country. The immense fortifications are now fast mouldering away. The history of Belgrade is too full of great events for us to attempt even a bare enumeration of them, so we prefer occupying our space with a brief glimpse of the very interesting town. This is composed partly of "lines of modern houses, but in general of rows of wooden stalls, in which the owner arranges his merchandise with no small degree of taste, and parades his customers, surrounded by his workmen intent upon their several tasks. The barber and coffee-vender alone carry on their trade in closed shops, and enjoy the luxury of glazed windows. To any traveller fresh from Western Europe the motley population of this town is a novel and highly interesting scene; the tailor and the gunsmith, the baker and the victualler, by their white turbans, sallow sombre faces, and haughty mien, will be instantly recognised as Turks; the red cap, sharp eye, and insinuating manners of the merchant and dealer betray their Greek extraction; and the merry countenance of the shopkeeper smirks beneath the round close bonnet of the native Servian."†

At no great distance from Belgrade we find the commencement of several groups of islands, densely covered with osiers and evergreen shrubs, and peopled with many varieties of water-fowl. Some of these are exceedingly beautiful. The variety of their forms, their numerous inlets, their clusters of magnificent shrubs hung with flowers, among which one might fancy we perceive some of the sweetest and most brilliant of our English hedgerows and gardens, the deep solitude interrupted only by the screams or occasional flight of strange-looking birds, all make up a scene on which the voyager delights to dwell. From hence "a field of Indian corn, hills deeply indented by the rains, and exhibiting sometimes the appearance of artificial fortresses, sometimes retiring to a distance

* Frickel's 'Pedestrian Tour.'

† 'Penny Cyclopædia,' article 'Belgrade,' vol. iv.

and leaving in front abrupt mounds of the most fantastic shapes; villages with their churches and steeples on one side, and churches and minarets on the other; Servians on our right fishing in little cockle-shells of boats; Hungarians on the left tending herds of swine; mountains towering in the distance;"* —engage our attention until we reach Moldava. A little below this town recommences the mountainous scenery of the Danube, and at the very entrance of the rocky gorge through which the river finds its course are the ruins of Kolubatz, occupied about a century ago by a band of Wallachian brigands. On emerging from this part, the rapids of the Danube are before us. The bed of the river is here wholly composed of rough rocks, sometimes starting up in masses nearly to the surface of the water, sometimes forming a wall across it from bank to bank. Passing over unnoticed many interesting places, and much beautiful and sublime scenery, we hasten to the Iron Gate of the Danube, a spot that, taken altogether, is perhaps the most remarkable feature of the river. This is a series of rapids, extending through a narrow valley formed on the north by the Banat range, an offset of the Transylvanian Carpathians, and on the south by a lateral range of Mount Balkan. The name is probably derived from the extreme difficulty of the passage, and from the ferruginous colour of the rocks, which occupy the entire bed of the Danube for nearly three miles. The rocks are exceedingly rough in their appearance, tumbled about in every kind of form and position, and, when the waters are low, have a very terrific appearance: Mr. Quin likens them to the gaping jaws of some infernal monster. When the Danube is at its ordinary level, the roar of the waters as they hurry through the Iron Gate is heard for many miles round. Vessels of a low draught may descend the rapids, but to ascend them is a matter of great difficulty; here therefore occurs the only obstruction to a water communication between Hungary and Turkey. The mountains which form the sides of this most extraordinary valley have an interest of another, but scarcely less absorbing kind. Roman antiquities of an important character are found there and in the neighbourhood; roads, bridges, &c. with inscriptions still readible. The most important of these are a road and bridge, both attributed to the Roman emperor Trajan. The former was constructed as a tracking-path along the Servian side of the Iron Gate. At the lower part of the passage an ancient corridor is cut in the rock; at the upper, huge mortice holes are let in for the insertion of beams, on which the corridor was borne along its face. A large inscription still legible gives the honour of this great work to Trajan. A recent traveller whose MSS. are quoted by a writer in the 'Quarterly Review' (No. 108), says, 'Never did I more strongly feel the greatness of that wonderful people, than when, on sailing down the Danube, I first observed the traces and comprehended the object to which this work was destined. . . . . Here was the evidence of the accomplishment by the Romans, although scarcely an indication of it remains in Roman authors, of an enterprise which is now universally admitted to be one of the most important for the public welfare of Europe." Mr. Quin took some pains to trace the exact site of the famous bridge across the Danube, and, it appears, with success. He found on the Wallachian bank an ancient tower of Roman construction, built on an eminence; and looking down the river, he distinctly observed the water curling over a series of impediments extending from bank to bank. At both extremities of the line thus formed, he found the remains of square pillars, and a ruin on one side appeared to him to have been the buttress of the first arch of the bridge. Of the cuts at the head of these articles, the first represents a scene near the celebrated Strudel and Wirbel, the other two scenes lower down the river.

* Mr. Quin's 'Steam Voyage.'

At the Iron Gate the Danube quits the Austrian dominions and enters those of Turkey. The country on the south continues for some time mountainous, then hilly, and by degrees sinks into a plain; on the north is the great level of Wallachia. In its course towards the Black Sea, the Danube divides frequently, forming numerous islands, especially below Silistria. Its width where undivided now generally averages from 1500 to 2000 yards, and its depth above 20 feet. Before reaching its mouth, several large rivers flow into it, as the Alt, Sereth, and Pruth. On its junction with the last-mentioned river it divides into several branches, which do not again unite, and it at last terminates its long course by issuing through seven several mouths into the Black Sea.

THE EDIBLE BIRDS' NESTS OF THE EASTERN ISLANDS.

There is an article of extensive commerce in the islands of the Eastern archipelago, which, from its very unusual character, considered in reference to European habits, is worthy of a brief notice. We mean *birds' nests* as an article of food.

In Java and other Eastern islands a bird called the *Hirundo nidis edulibus*, a species of swallow, forms its nest of a substance which is eatable, and which is much prized by the higher classes in China. The nature of this substance has been the subject of much controversy among the Europeans who have had an opportunity of inspecting it, and among whom are Sir Stamford Raffles, Captain Forrest, Mr. Crawfurd, and M. Hogendorp. Captain Forrest states,—"The bird with an edible nest is called *Jaimalani* by the natives of the Moluccas, and *Layang-layang* by the Malays. It is black as jet, and very much like a martin, but considerably smaller. Its nests, which the Malays call *sarang*, are found in caves, and generally in those to which the sea has access; and as they are built in rows on perpendicular rocks, from which the young birds frequently fall, those caves are frequented by fish, and often by snakes, who are hunting for prey. The nests are made of a slimy gelatinous substance found on the shore, of the sea-weed called *agal-agal*, and of a soft greenish sizy matter often seen on rocks in the shade when the water oozes from above." Sir Stamford Raffles states however, that from observations which have been made at Java, it has been inferred that the mucilaginous substance of which the nests are formed is not obtained from the ocean. The birds, it is true, generally inhabit the caverns in the vicinity of the sea, as agreeing best with their habits, and affording them the most convenient retreats for building their nests; but several caverns are found inland at a distance of forty or fifty miles from the sea, containing nests similar to those on the shore. From many of their retreats along the southern coasts the birds have been observed to take their flight in an inland direction towards the pools, lakes, and extensive marshes covered with stagnant water, as affording them abundance of their food, which consists of flies, musquitoes, gnats, and small insects of every description. The sea that washes the foot of the cliffs where they most abound is almost always in a state of violent agitation, and affords none of those substances which have been supposed to constitute the food of the esculent swallow. From these and other circumstances, it has been supposed by Dr. Horsfield, that the nest is formed by an animal elaboration or secretion of the bird itself.

From the substance of the nests (which appears from the preceding remarks to be a matter still in dispute),

we pass on to notice their appearance and localities. In shape the nest is like that of an ordinary swallow; and in external appearance, as well as consistence, somewhat resembles a fibrous ill-concocted isinglass. When the nest is broken transversely, it displays several concentric layers, from which its mode of fabrication may be in some degree judged. The nests are collected by the natives twice a-year; and if regularly collected, and no unusual injury be offered to the caverns, the supply remains tolerably equable, very little increase of quantity being found to result from leaving the caves unmolested for a year or two. Most of the caverns are so situated as to render the task of collecting the nests very difficult, and requiring all the skill of persons trained to that purpose. Mr Crawfurd says, that the most remarkable and productive caves which he has met with are those of *Karang-Bolang*, in the province of Baglen, on the south coast of Java. Here the caves are only to be approached by a perpendicular descent of many hundred feet, by ladders of bamboo and rattan, over a sea rolling violently against the rocks. When the mouth of the cavern is attained, the perilous office of taking the nests must often be performed by torch-light, by penetrating into recesses of the rock, where the slightest trip would be fatal to the adventurers, who see nothing below them but the turbulent surf making its way into the chasms of the rock.

Hogendorp says, that in order to secure the fidelity of the natives employed in this perilous undertaking, they are stripped naked before descending into the caverns, as a means of preventing embezzlement. Before descending, they receive benediction from the hands of certain Mohammedan priests, who are stationed among the guards at the entrance of the cavern. These priests, the overseers, and the nest-gatherers, are all well paid by the government as a means of insuring their honesty.

Mr. Crawfurd has given a minute account of the commercial transactions connected with these nests, from which we learn that the value of the nests depends on various circumstances. The best nests are those obtained in deep damp caves, and such as are taken before the birds have laid their eggs; whereas the coarsest are those which are taken after the young have been fledged. The finest are the whitest, that is, those taken before the nest has been rendered impure by the young birds; the inferior qualities are dark-coloured, streaked with blood, or intermixed with feathers. Some of the natives, however, describe the purer nests as the dwelling of the male bird, and always so designate them in commerce. The only preparation which the birds' nests undergo is that of simply drying without direct exposure to the sun; after which they are packed in small boxes, usually of half a picul (a *picul* is equal to about 133 lbs. English). They are assorted for the Chinese market into three kinds, according to their qualities, distinguished as *first* or best, *second*, and *third* qualities. Caverns that are regularly managed generally yield rather more than half of the first quality, about a third of the second, and a small proportion of the inferior. The large revenue yielded by the sale of these nests (of which we shall speak presently) is claimed as the exclusive property of the sovereign, and everywhere forms a branch of revenue so important as to raise this singular traffic to a prominent station in the Eastern islands. This value however, as Mr. Crawfurd observes, is subject to much variation, according to the locality of the cavern. Being often in remote and sequestered situations, in a country of a lawless character, a property so valuable and exposed is subject to the perpetual depredation of freebooters; and it not unfrequently happens that an attack upon them is the principal object of the warfare committed by one petty state against another. In such situations, the expense of affording them protection is so heavy, that they are necessarily of little value. But in situations where the caverns are difficult of access to strangers, and where there reigns enough of order and tranquillity to secure them from depredation, and to admit of the nests being obtained without other expense than the simple labour of collecting them, the value of the property is very great.

The prices obtained for the birds'-nests at Canton are as follows: best, 3500 Spanish dollars the picul, or 5*l.* 18*s.* 1½*d.* per lb.; seconds, 2800 dollars the picul; and thirds, 1600 dollars. When they afterwards get into the Chinese markets, a still nicer classification is often made; the whole are frequently divided into three great classes, under the commercial appellations of *Paskat*, *Chikat*, and *Tung-tung*; each of which, according to quality, is subdivided into three inferior orders. The prices are thus made to vary from 1200 to 4200 Spanish dollars the picul, the latter of which rates is more than equal to their weight in solid silver! As to the quantity sent to China, it is not easily estimated. From Java it is supposed to amount to 200 piculs, or 27,000*l.* annually, of which the greater part is of the best quality. From the *Suluk* archipelago the annual quantity is estimated at 530 piculs; from Macassar, 30 piculs. Taking all the islands situated between Ceylon and New Guinea, in most of which these nests are found, Mr. Crawfurd supposes that the total quantity sent to China annually amounts to about a quarter of a million pounds weight, for which a sum nearly equal to 300,000*l.* is paid. Hogendorp says, that there are about fifty or sixty nests to a pound weight; so that the annual supply of nests must be from twelve to fifteen millions.

The most singular circumstance connected with this subject is, that the Chinese appear to be the only purchasers; they being the only people who have persuaded themselves to deem these nests a luxury. When the nests are steeped in water, they become softened, and are separable into fibres of a mucilaginous character; and in this form they are used as an ingredient in ragouts, soups, &c. They are consumed only by the great, and chiefly by the emperor and his court. The impression on the part of the Chinese seems to be that the use of the nests is powerfully stimulating and tonic; but as the Japanese, who so much resemble the Chinese in many of their habits, have no relish for the edible nests, and as it does not appear that any of the other islanders care much about them as an article of food, the use of these nests in China may perhaps be attributed to a taste for what is costly and difficult of attainment, rather than for any intrinsic quality in the nests themselves. But, be this as it may, one of the modes in which those of the best kind are said to be used is as follows:—The nests are first soaked in water to soften, are then pulled to pieces, and after being mixed with ginseng, are put into the body of a fowl. The whole is then stewed in a pot with a sufficient quantity of water, over a fire, where it remains all night, and in the morning the fowl is ready to be eaten. In other cases the softened nest is used as a kind of herb or seasoning in broths and soups.

In conclusion we may quote a remark from Mr. Crawfurd as to the nature of this traffic. "The price of birds' nests is, of course, a monopoly price, the quantity produced being by nature limited and incapable of being augmented. The value of the labour expended in bringing birds' nests to market is but a trifling portion of their price, which consists of the highest price which the luxurious Chinese will afford to pay for them, and which is a tax paid by that nation to the inhabitants of the Indian islands. There is perhaps no production upon which human industry is exerted, of which the cost of production bears so small a proportion to the market price."